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IS 1541 (2006): Glass filter funnels [CHD 10: Glassware]

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काँच की फिल्टर फनल — विशिष्टि

(दूसरा पुनरीक्षण)

Indian Standard

GLASS FILTER FUNNELS — SPECIFICATION

(Second Revision)

ICS 71.040.20

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BUREAU OF INDIAN STANDARDS
MANAK BHAVAN, 9 BAHADUR SHAH ZAFAR MARG
NEW DELHI 110002

March 2006

Price Group 2

Glass, Glassware and Laboratoryware Sectional Committee, CHD 10

FOREWORD

This Indian Standard (Second Revision) was adopted by the Bureau of Indian Standards, after the draft finalized by the Glass, Glassware and Laboratoryware Sectional Committee had been approved by the Chemical Division Council.

This standard was first published in 1959 and subsequently revised in 1978. In this revision the requirements of 50, 65, 75 and 125 mm nominal sizes funnels have been incorporated and the series of nominal sizes has been brought in close alignment with the average dimensions followed in many countries. Marking clause has also been modified.

The composition of the Committee responsible for formulation of this standard is given in Annex A.

For the purpose of deciding whether a particular requirement of this standard is complied with, the final value, observed or calculated, expressing the result of a test or analysis, shall be rounded off in accordance with IS 2 : 1960 'Rules for rounding off numerical values (*revised*)'. The number of significant places retained in the rounded off value should be the same as that of the specified value in this standard.

Indian Standard

GLASS FILTER FUNNELS — SPECIFICATION

(Second Revision)

1 SCOPE

This standard prescribes requirements and methods of sampling and test for glass filter funnels for general laboratory use.

2 REFERENCES

The standards listed below contain provisions which through reference in this text, constitute provisions of this standard. At the time of publication, the editions indicated were valid. All standards are subject to revision and parties to agreements based on this standard are encouraged to investigate the possibility of applying the most recent editions of the standards indicated below:

IS No.	*Title*
1382 : 1981	Glossary of terms relating to glass and glassware (*first revision*)
2303 (Part 1/ Sec 1) : 1994	Grading glass for alkalinity: Part 1 Hydrolytic resistance, Section 1 Hydrolytic resistance of glass grains at 98°C — Method of test and classification (*first revision*)
4426 : 1992	Methods of sampling laboratory glassware (*first revision*)
6506 : 1972	Methods for thermal shock tests on glassware

3 TERMINOLOGY

For the purpose of this standard, the definitions given in IS 1382 shall apply.

4 TYPES AND PATTERNS

4.1 Types

There shall be two types of funnels, namely, short stem and long stem.

4.2 Patterns

The funnels shall be of two patterns, namely, plain and fluted.

5 NOMINAL SIZES

Funnels shall be of the following nominal sizes:

a) *Short Stem* — 35, 45, 50, 55*, 65, 75, 80*, 100, 125, 150, 200*, 250* and 300 mm; and

b) *Long Stem* — 45, 50, 55*, 65, 70,75 and 80* mm.

NOTE — The sizes with (*) mark shall be either plain or fluted patterns.

6 DESIGNATION

The funnels shall be designated by their rim diameter in millimetres (*see D* in Tables 1 and 2), type and pattern.

Example : A funnel 75 mm in rim diameter, having a short stem, and of plain pattern shall be designated as '75-SS/ P'.

7 REQUIREMENTS

7.1 Material

The funnels shall be made from clear glass not having any pronounced tint. They shall be as free as possible from stones, bubbles, striae, cords and other visual defects and shall be reasonably free from internal strain.

7.1.1 *Limit of Alkalinity*

When graded according to the method prescribed in IS 2303 (Part 1/Sec 1), the material shall conform to Class HGB 2 of glass.

7.1.2 *Thermal Shock Resistance*

When tested in accordance with Method B of IS 6506, the funnels shall withstand, without any damage, a thermal shock of 75°C.

NOTE — This test shall apply only to plain funnels.

7.1.3 *Boiling Test*

The funnels shall not show any evidence of scumming, chipping or cracking when completely immersed in distilled water in a closed vessel having a small vent for steam, and boiled continuously for 6 h; boiling water being added as necessary to compensate for evaporation losses.

NOTE — Funnels shall be suspended in water so that they do not come in contact with the base or the sides of the vessel.

7.2 Workmanship and Finish

The funnels shall be regular in shape and smoothly finished. They shall be symmetrical about the axis, which shall be perpendicular, and the plane of the rim.

7.2.1 *Bowl*

The bowl of the funnels shall be neatly and securely fused to the stem. The inner wall of the bowl shall be plain of fluted depending on the pattern and shall diverse from the axis, above the stem, forming a cone of an angle of 60 (+ 0°, – 3°). The rim of the funnels shall be mould-finished, beaded or ground and fire-polished as specified.

7.2.2 *Stem*

The stem shall be cylindrical or slightly tapered downwards. Its tip shall be ground to a minimum angle of 30° to its axis and fire-polished.

7.3 Dimensions

The dimensions of the funnels shall be as prescribed in Tables 1 and 2 read with Fig. 1 and Fig. 2 respectively.

8 MARKING AND PACKING

8.1 Marking

8.1.1 Each funnel shall be marked with the following:

a) Manufacturer's name or recognized trade-mark, if any;

b) Designation of the funnel;

c) Month and year of manufacturing; and

d) Batch/Lot number.

8.1.2 *BIS Certification Marking*

Each funnel may also be marked with the Standard Mark.

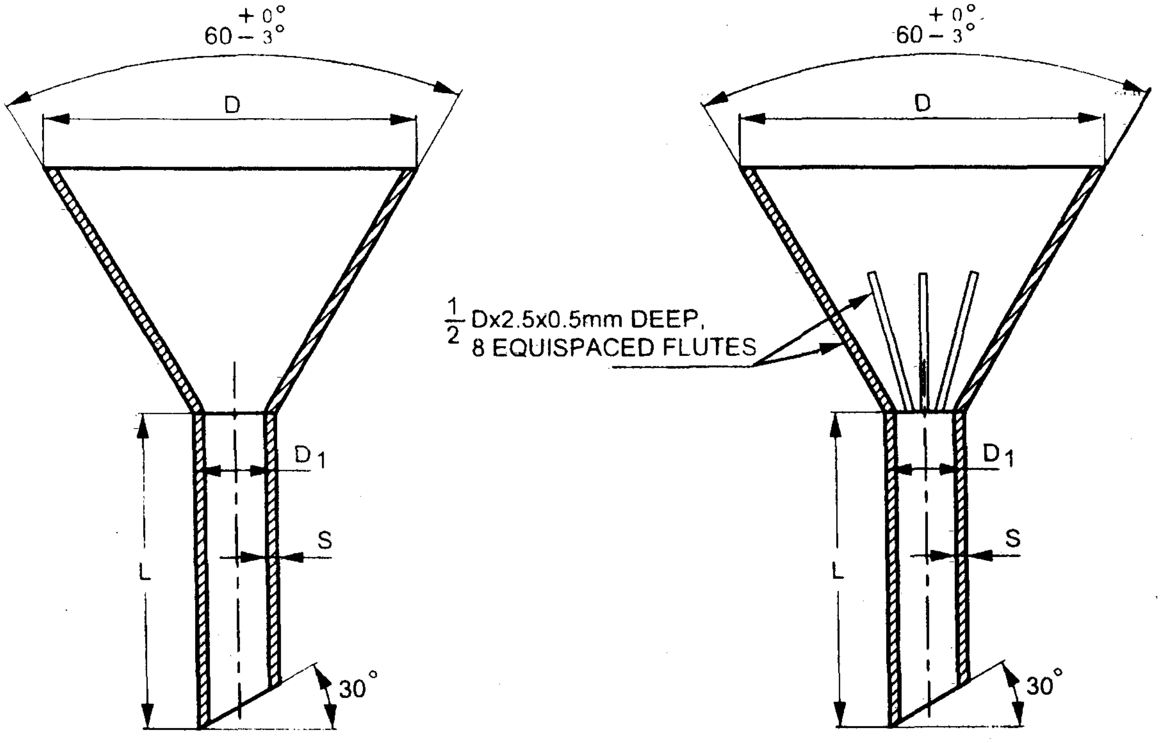
8.1.2.1 The use of the Standard Mark is governed by the provisions of the *Bureau of Indian Standards Act*, 1986 and the Rules and Regulations made thereunder. The details of conditions under which the licence for the use of Standard Mark may be granted to manufacturers or producers may be obtained from the Bureau of Indian Standards.

8.2 Packing

The funnels shall be packed as agreed to between the purchaser and the supplier.

9 SAMPLING

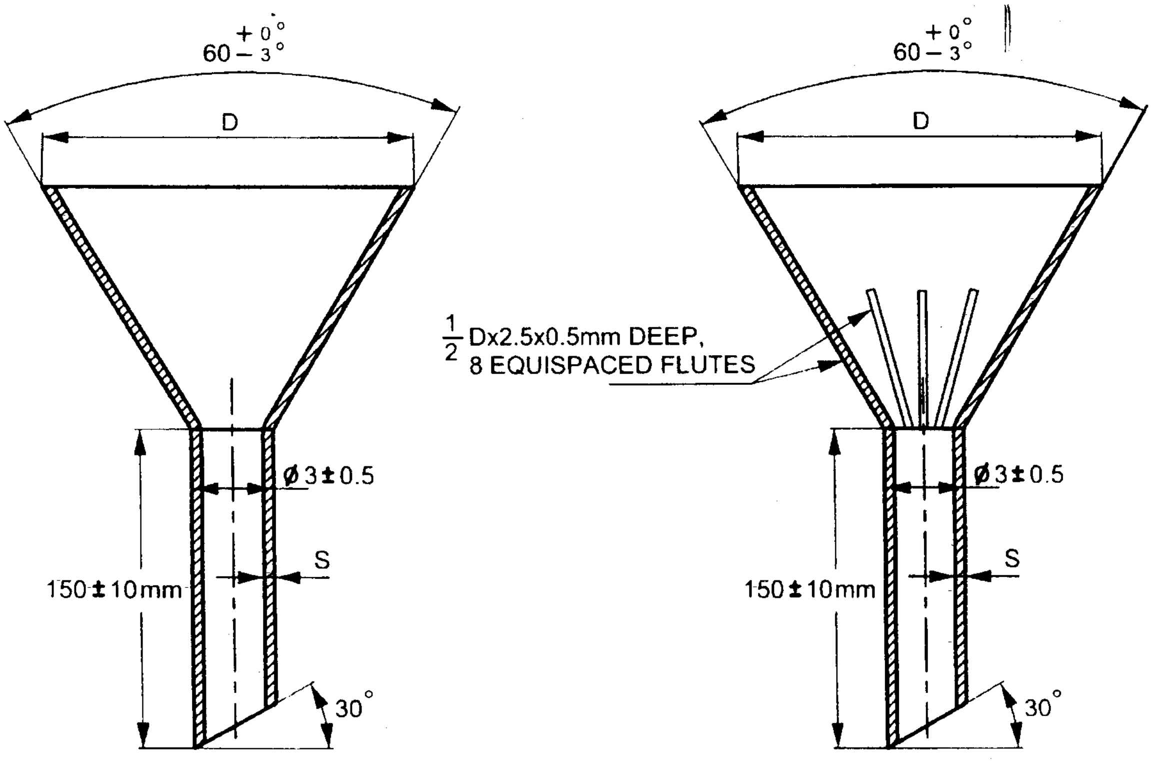
Representative samples of funnels shall be drawn and adjudged as prescribed in IS 4426.



PLAIN

FLUTED

FIG. 1 SHORT-STEM FILTER FUNNEL



PLAIN

FLUTED

FIG. 2 LONG-STEM FILTER FUNNEL

Table 1 Dimensions of Short-Stem Filter Funnel

(*Clauses* 6 *and* 7.3)

All dimensions in millimetres.

Sl No.	Nominal Size	*D* ± 5	*D*$_1$	*L* ± 10	*S* *Min*
(1)	(2)	(3)	(4)	(5)	(6)
i)	35	35	3 ± 0.5	35	1.0
ii)	45	45	3 ± 0.5	45	1.0
iii)	50	50	5 ± 1	50	1.3
iv)	55[1]	55	5 ± 1	55	1.3
v)	65	65	5 ± 1	65	1.5
vi)	75	75	6 ± 1	75	1.5
vii)	80[1]	80	6 ± 1	80	1.5
viii)	100	100	6 ± 1	100	1.5
ix)	125	125	10 ± 1	125	1.6
x)	150	150	12 ± 1.5	150	1.6
xi)	200[1]	200	20 ± 2.5	175	1.6
xii)	250[1]	250	24 ± 2.5	175	1.6
xiii)	300	300	24 ± 3	175	1.8

[1] Sizes prescribed for short-stem fluted funnels also.

Table 2 Dimensions of Long-Stem Filter Funnel

(*Clauses* 6 *and* 7.3)

All dimensions in millimetres.

Sl No.	Nominal Size	*D* ± 5	*S* *Min*
(1)	(2)	(3)	(4)
i)	45	45	1.0
ii)	50	50	1.5
iii)	55[1]	55	1.5
iv)	65	65	1.5
v)	70	70	1.5
vi)	75	75	1.5
vii)	80[1]	80	1.5

[1] Sizes prescribed for long-stem fluted funnels also.

ANNEX A

(Foreword)

COMMITTEE COMPOSITION

Glass, Glassware and Laboratoryware Sectional Committee, CHD 10

Organization	*Representative(s)*
Central Glass and Ceramic Research Institute, Kolkata	Dr R. N. Dwivedi (***Chairman***) Shri Sarup Sircar (*Alternate*)
Office of Development Commissioner (SSI), New Delhi	Shri Ajit Singh Sood
Asahi India Glass Ltd, Gurgaon	Shri A. K. Chakrabarty
Associated Instrument Manfacturers (India) Ltd, New Delhi	Shri K. K. Vayas Dr A. P. Bhatnagar (*Alternate*)
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Building Materials and Technology Promotion Council, New Delhi	Shri A. K. Tiwari Dr Amit Rai (*Alternate*)
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United Breweries Group, Bangalore	Shri S. K. Rastogi
Voluntary Organization in Interest of Consumer Education (VOICE), New Delhi	Shri M. A. U. Khan Shri H. Wadhwa (*Alternate*)
BIS Directorate General	Dr U. C. Srivastava, Scientist 'F' & Head (Chem) [Representing Director General (*Ex-officio*)]

Member-Secretary
Shri S. N. Chatterjee
Director (Chem), BIS

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This Indian Standard has been developed from Doc : CHD 10 (1304).

Amendments Issued Since Publication

Amend No.	Date of Issue	Text Affected

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Printed at New India Printing Press, Khurja, India